Title (en)

Part length rod placement in boiling water reactor fuel assembly for reactivity control.

Title (de)

Teillängenstabanordnung in Siedewasserreaktorbrennstabbündel zur Reaktivitätssteuerung.

Title (fr)

Emplacement des barreaux à longeurs partielles dans un assemblage de combustible du type réacteur à eau bouillante pour contrÔler la réactivité.

Publication

EP 0514215 A1 19921119 (EN)

Application

EP 92304445 A 19920515

Priority

US 70221391 A 19910517

Abstract (en)

Part-length rods (30), (30 min) located adjacent the central water rod (25 min) or water rods (25 min) is disclosed which serendipitously realizes improved hot to cold reactivity swing. The fuel bundle is conventional including a lower tie plate, a upper tie plate, a plurality of full-length supported rods (R) with a channel (20) extending therebetween. Water rods (25 min) are present in the fuel bundle to provide conventional improved moderator to fuel ratio in the upper two-phased portion of the fuel bundle. At least some part-length rods (30) (30 min) are placed adjacent the water rods (25 min) and terminate below the upper tie plate so as to define upward volumes adjacent the water rods (25 min) which vent volumes fill with water when the reactor is in the cold state. It has been found that by clustering large concentrations of moderator into the central and more highly reactive portion of the fuel bundle that an improved cold state reactivity results. <IMAGE>

IPC 1-7

G21C 3/326

IPC 8 full level

G21C 3/326 (2006.01); **G21C 3/328** (2006.01)

CPC (source: EP)

G21C 3/326 (2013.01); Y02E 30/30 (2013.01)

Citation (search report)

- [X] EP 0419228 A1 19910327 - HITACHI LTD [JP]
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Designated contracting state (EPC)

CH DE ES IT LI SE

DOCDB simple family (publication)

EP 0514215 A1 19921119; **EP 0514215 B1 19960207**; DE 69208142 D1 19960321; ES 2083682 T3 19960416; JP H05150067 A 19930618

DOCDB simple family (application)

EP 92304445 A 19920515; DE 69208142 T 19920515; ES 92304445 T 19920515; JP 12305092 A 19920515